

IN THE CLAIMS

Please amend the claims as follows:

The heading is amended as follows: IN THE CLAIMS What is claimed is:

1. (Currently Amended) A standoff/electrical device comprising:

a standoff device arrangement to provide predetermined control of a standoff distance between electrical components mounted together with opposing conductive grid array patterns, wherein the standoff device arrangement comprises a plurality of rigid one-piece standoff pins;
and

an electrical function structure to provide a predetermined electrical function to at least one of the electrical components.

2. (Currently Amended) [[A]] The standoff/electrical device as claimed in Claim of claim 1, [[where]] wherein the standoff device arrangement comprises a plurality of rigid one-piece standoff pins ~~having~~ have a mating relationship with at least one of the electrical components and a distancing control structure to control the standoff distance, with at least a sub-plurality of the plurality of rigid standoff pins having the electrical function structure ~~to provide the electrical function.~~

3. (Currently Amended) [[A]] The standoff/electrical device as claimed in Claim of claim 2, [[where]] wherein the distancing control structure comprises one or more stops on at least a ~~portion of~~ at least one pin of the plurality of rigid standoff pins ~~has which one of a dumbbell~~

~~shape and a rolling pin shape, and where protruding portions of the dumbbell shape and the rolling pin shape serve to buttress against the electrical components to serve as the distancing control structure to control the standoff distance.~~

4. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~ 1, ~~[[where]] wherein~~ the predetermined electrical function is ~~at least one selected from the group consisting of~~ ~~[[:]] an electrical conduction path function to provide an electrical conduction path between the electrical components;~~ a resistor function~~[[:]]~~, a capacitor function; ~~and,~~ an inductor function, and any combination thereof.

5. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~ 1, ~~[[where]] wherein~~ at least one of the electrical components is a printed circuit board (PCB), ~~and where further wherein~~ the conductive grid array patterns are ~~at least one selected from the group consisting of~~ ~~[[:]] a bump/ball grid array (BGA)[[:]], a micro BGA (μBGA), a land grid array; and,~~ a pad grid array, and any combination thereof.

6. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~ 1, ~~[[where]] wherein~~ the standoff/electrical device is ~~at least one of~~ composed either substantially entirely of electrical-conductive material; ~~and, or~~ constructed to have at least two differing areas composed of ~~[[:]] a material selected from the group consisting of~~ electrical-conductive material~~[[:]]~~, electrical-resistive material~~[[:]]~~, electrical-insulative material~~[[:]]~~, electrical-dielectric material; ~~and,~~ electrical-inductor material, and any combination thereof.

7. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~
1, ~~[[where]]~~ wherein the standoff/electrical device is provided integrally as part of one of the electrical components.

8. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~
1, ~~[[where]]~~ wherein the standoff/electrical device comprises alignment structure to substantially align the opposing conductive ~~grid-array~~ grid array patterns of the electrical components during mounting together thereof.

9. (Currently Amended) Mounted components comprising:
at least two electrical components having opposing conductive ~~grid-array~~ grid array patterns for electrical connection thereof; ~~[[and]]~~
a standoff device to provide predetermined control of a standoff distance between electrical components mounted together with opposing conductive grid array patterns, wherein the standoff device comprises a plurality of rigid one-piece standoff pins; and
an electrical function structure to provide a predetermined electrical function to at least one of the electrical components.

10. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~
9, ~~[[where]]~~ wherein the ~~standoff device comprises a plurality of rigid one-piece~~ standoff pins ~~having~~ have a mating relationship with at least one of the electrical components and a distancing

control structure to control the standoff distance, with at least a sub-plurality of the plurality of rigid standoff pins having the electrical function structure ~~to provide the electrical function.~~

11. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~ 10, ~~[[where]]~~ wherein the distancing control structure comprises one or more stops on at least a ~~portion of at least one pin of the plurality of rigid standoff pins has which one of a dumbbell~~ shape and a rolling pin shape, and where protruding portions of the dumbbell shape and the ~~rolling pin shape serve to buttress against the electrical components to serve as the distancing~~ control structure to control the standoff distance.

12. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~ 9, ~~[[where]]~~ wherein the predetermined electrical function is at least one selected from the group consisting of ~~[[[:]]~~ an electrical conduction path function ~~to provide an electrical conduction path~~ between the electrical components; ~~a resistor function~~ [[[:]] , a capacitor function; ~~and,~~ an inductor function, and any combination thereof.

13. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~ 9, ~~[[where]]~~ wherein at least one of the electrical components is a printed circuit board (PCB), ~~and where~~ further wherein the conductive grid array patterns are ~~at least one~~ selected from the group consisting of ~~[[[:]]~~ a bump/ball grid array (BGA) ~~[[[:]]]~~, a micro BGA (μ BGA), a land grid array; ~~and,~~ a pad grid array, and any combination thereof.

14. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~ 9, ~~[[where]]~~ wherein the electrical function structure is ~~one of-~~ composed either substantially entirely of electrical-conductive material; ~~and, or~~ constructed ~~[[as]]~~ to have at least two differing areas composed of~~[[:]]~~ a material selected from the group consisting of electrical-conductive material~~[[;]]~~, electrical-resistive material~~[[;]]~~, electrical-insulative material~~[[;]]~~, electrical-dielectric material; ~~and,~~ electrical-inductor material, and any combination thereof.

15. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~ 9, ~~[[where]]~~ wherein the standoff device is provided integrally as part of one of the electrical components.

16. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~ 9, ~~[[where]]~~ wherein the standoff device comprises ~~aligner components~~ alignment structure to substantially align the opposing conductive ~~grid-array~~ grid array patterns of the electrical components during mounting together thereof.

17. (Currently Amended) A components-mounting method comprising:
 mounting at least two electrical components having opposing conductive ~~grid-array~~ grid array patterns for electrical connection thereof; and
 interposing a standoff device to provide predetermined control of a standoff distance between the at least two electrical components mounted together with opposing conductive grid

array patterns, wherein the standoff device comprises a plurality of rigid one-piece standoff pins;

and

providing an electrical function structure to provide a predetermined electrical function to at least one of the electrical components.

18. (Currently Amended) ~~[[A]] The method as claimed in Claim of claim 17, [[where]]~~
wherein the standoff device comprises a plurality of rigid one-piece standoff pins having have a
mating relationship with at least one of the electrical components and a distancing control
structure to control the standoff distance, with at least a sub-plurality of the plurality of rigid
standoff pins having the electrical function structure ~~to provide the electrical function.~~

19. (Currently Amended) ~~[[A]] The method as claimed in Claim of claim 18, [[where]]~~
wherein the distancing control structure comprises one or more stops on at least a portion of at
least one pin of the plurality of rigid standoff pins has which ~~one of a dumbbell shape and a~~
~~rolling pin shape, and where protruding portions of the dumbbell shape and the rolling pin shape~~
~~serve to buttress against the electrical components to serve as the distancing control structure to~~
~~control the standoff distance.~~

20. (Currently Amended) ~~[[A]] The method as claimed in Claim of claim 17, [[where]]~~
wherein the predetermined electrical function is at least one selected from the group consisting
of~~[[:]]~~ an electrical conduction path function ~~to provide an electrical conduction path between~~
~~the electrical components;~~ a resistor function~~[[;]]~~ , a capacitor function; ~~and,~~ an inductor
function, and any combination thereof.

21. (Currently Amended) ~~[[A]] The method as claimed in Claim of claim~~ 17, ~~[[where]]~~ wherein at least one of the electrical components is a printed circuit board (PCB), ~~and where~~ further wherein the conductive grid array patterns are ~~at least one~~ selected from the group consisting of ~~[[:]]~~ a bump/ball grid array (BGA)~~[[;]],~~ a micro BGA (μ BGA), a land grid array; ~~and,~~ a pad grid array, and any combination thereof.

22. (Currently Amended) ~~[[A]] The method as claimed in Claim of claim~~ 17, ~~[[where]]~~ wherein the standoff device is ~~one of:~~ composed either substantially entirely of electrical-conductive material; ~~and,~~ or constructed to have at least two differing areas composed of ~~[[:]]~~ a material selected from the group consisting of electrical-conductive material~~[[;]],~~ electrical-resistive material~~[[;]],~~ electrical-insulative material~~[[;]],~~ electrical-dielectric material; ~~and,~~ electrical-inductor material, and any combination thereof.

23. (Currently Amended) ~~[[A]] The method as claimed in Claim of claim~~ 17, comprising providing the standoff device integrally as part of one of the electrical components.

24. (Currently Amended) ~~[[A]] The method as claimed in Claim of claim~~ 17, comprising providing the standoff device with alignment structure to substantially align the opposing conductive ~~grid array~~ grid array patterns of the electrical components during mounting together thereof.

25. (Currently Amended) A standoff/electrical device comprising a standoff member having a predetermined rigid standoff thickness and disposable between electrical components mounted together with opposing conductive grid array patterns so as to maintain a predetermined distance therebetween, wherein the standoff member comprises a plurality of rigid one-piece standoff pins, the standoff member having an electrical path electrically connectable to at least one of the electrical components.

26. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~ 25, ~~[[where]] wherein the standoff member comprises a plurality of rigid one-piece standoff pins having~~ have a mating relationship with at least one of the electrical components, with at least a sub-plurality of the plurality of rigid standoff pins having the electrical path.

27. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~ 26, ~~[[where]] wherein the predetermined rigid standoff thickness comprises one or more stops on at least a portion of at least one pin of the plurality of rigid standoff pins which one of a dumbbell shape and a rolling pin shape, and where protruding portions of the dumbbell shape and the rolling pin shape serve to buttress against the electrical components to serve as the predetermined rigid standoff thickness to maintain the predetermined distance.~~

28. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~ 25, ~~[[where]] wherein the electrical path is at least one selected from the group consisting of~~ [[:] a substantially non-resistive electrical path~~[[:]]~~, a resistive electrical path~~[[:]]~~, a capacitive electrical path~~;~~ and, an inductive electrical path, and any combination thereof.

29. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~
25, ~~[[where]] wherein~~ at least one of the electrical components is a printed circuit board (PCB),
~~and where further wherein~~ the conductive grid array patterns are ~~at least one selected from the~~
~~group consisting of~~ ~~[[]]~~ a bump/ball grid array (BGA)~~[[]]~~, a micro BGA (μ BGA), a land grid
array; ~~and~~, a pad grid array, and any combination thereof.

30. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~
25, ~~[[where]] wherein~~ the standoff/electrical device is ~~one of~~ composed either substantially
entirely of electrical-conductive material; ~~and, or~~ constructed ~~[[as]] to have~~ at least two differing
areas composed of ~~[[]]~~ a material selected from the group consisting of electrical-conductive
material~~[[]]~~, electrical-resistive material~~[[]]~~, electrical-insulative material~~[[]]~~, electrical-
dielectric material; ~~and~~, electrical-inductor material, and any combination thereof.

31. (Currently) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~ 25,
~~[[where]] wherein~~ the standoff/electrical device is provided integrally as part of one of the
electrical components.

32. (Currently Amended) ~~[[A]] The standoff/electrical device as claimed in Claim of claim~~
25, ~~[[where]] wherein~~ the standoff/electrical device comprises ~~[[an]] a~~ first aligner of
predetermined shape engageable with a second aligner on at least one of the electrical
components ~~so as to substantially align the opposing conductive grid array grid array~~ patterns of
the electrical components during mounting together thereof.

33. (Currently Amended) Mounted components comprising:

at least two electrical components having opposing conductive ~~grid array~~ grid array patterns for electrical connection thereof; and

a standoff/electrical device including a standoff member having a predetermined rigid standoff thickness and disposable between the at least two electrical components mounted together with the opposing conductive grid array patterns so as to maintain a predetermined distance therebetween, wherein the standoff member comprises a plurality of rigid one-piece standoff pins, the standoff member having an electrical path electrically connectable to at least one of the at least two electrical components.

34. (Currently Amended) ~~Mounted~~ The mounted components as claimed in Claim of claim 33, ~~[[where]]~~ wherein the standoff member comprises a plurality of rigid one-piece standoff pins ~~having~~ have a mating relationship with at least one of the at least two electrical components, with at least a sub-plurality of the plurality of rigid standoff pins having the electrical path.

35. (Currently Amended) ~~Mounted~~ The mounted components as claimed in Claim of claim 34, ~~[[where]]~~ wherein the predetermined rigid standoff thickness comprises one or more stops on at least a portion of at least one pin of the plurality of rigid standoff pins which one of a ~~dumbbell shape and a rolling pin shape, and where protruding portions of the dumbbell shape and the rolling pin shape serve to~~ buttress against the electrical components ~~to serve as the predetermined rigid standoff thickness to maintain the predetermined distance.~~

36. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~
33, [[where]] wherein the electrical path is ~~at least one~~ selected from the group consisting of[[:]] a substantially non-resistive electrical path[[;]] , a resistive electrical path[[;]] , a capacitive electrical path;~~and~~, an inductive electrical path, and any combination thereof.

37. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~
33, [[where]] wherein at least one of the at least two electrical components is a printed circuit board (PCB), and [[where]] wherein the conductive grid array patterns are ~~at least one~~ selected from the group consisting of[[:]] a bump/ball grid array (BGA)[[;]] , a micro BGA (μ BGA), a land grid array;~~and~~, a pad grid array, and any combination thereof.

38. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~
33, [[where]] wherein the standoff/electrical device is [[one of:]] composed either substantially entirely of electrical-conductive material[[; and,]] or constructed [[as]] to have at least two differing areas composed of [[:]] a material selected from the group consisting of electrical-conductive material[[;]], electrical-resistive material[[;]], electrical-insulative material[[;]], electrical-dielectric material;~~and~~, electrical-inductive material, and any combination thereof.

39. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~
33, [[where]] wherein the standoff/electrical device is provided integrally as part of one of the electrical components.

40. (Currently Amended) ~~Mounted~~ The mounted components ~~as claimed in Claim of claim~~ 33, where the standoff/electrical device comprises a first aligner of predetermined shape engageable with a second aligner on at least one of the at least two electrical components so as to substantially align the opposing conductive ~~grid array~~ grid array patterns of the at least two electrical components during mounting together thereof.

41. (New) A standoff/electrical device comprising:

a standoff device to provide predetermined control of a standoff distance between electrical components mounted together with opposing conductive grid array patterns, wherein the standoff device comprises a plurality of rigid standoff pins having a mating relationship with at least one of the electrical components and a distancing control structure to control the standoff distance, wherein the distancing control structure comprises one or more stops on at least one pin of the plurality of rigid standoff pins which buttress against the electrical components; and

an electrical function structure to provide a predetermined electrical function to at least one of the electrical components, wherein at least a sub-plurality of the plurality of rigid standoff pins have the electrical function structure.

42. (New) The device of claim 41 wherein at least a portion of the at least one pin has a dumbbell shape or a rolling-pin shape.

43. (New) The device of claim 41, wherein the predetermined electrical function is selected from the group consisting of an electrical conduction path function, a resistor function, a capacitor function, an inductor function, and any combination thereof.

44. (New) The device of claim 41 wherein at least one of the electrical components is a printed circuit board (PCB), further wherein the conductive grid array patterns are selected from the group consisting of a bump/ball grid array (BGA), a micro BGA (μ BGA), a land grid array, a pad grid array, and any combination thereof.

45. (New) Mounted components comprising:

at least two electrical components having opposing conductive grid array patterns for electrical connection thereof;

a standoff device to provide predetermined control of a standoff distance between electrical components mounted together with opposing conductive grid array patterns wherein the standoff device arrangement comprises a plurality of rigid standoff pins having a mating relationship with at least one of the electrical components and a distancing control structure to control the standoff distance, wherein the distancing control structure comprises one or more stops on at least one pin of the plurality of rigid standoff pins which buttress against the electrical components; and

an electrical function structure to provide a predetermined electrical function to at least one of the electrical components, wherein at least a sub-plurality of the plurality of rigid standoff pins have the electrical function structure.

46. (New) The components of claim 45 wherein at least a portion of the at least one pin has a dumbbell shape or a rolling-pin shape.

47. (New) The components of claim 45, wherein the predetermined electrical function is selected from the group consisting of an electrical conduction path function, a resistor function, a capacitor function, an inductor function, and any combination thereof.

48. (New) The components of claim 45 wherein at least one of the electrical components is a printed circuit board (PCB), further wherein the conductive grid array patterns are selected from the group consisting of a bump/ball grid array (BGA), a micro BGA (μ BGA), a land grid array, a pad grid array, and any combination thereof.

49. (New) A components-mounting method comprising:

mounting at least two electrical components having opposing conductive grid array patterns for electrical connection thereof;

interposing a standoff device to provide predetermined control of a standoff distance between the at least two electrical components mounted together with opposing conductive grid array patterns, wherein the standoff device comprises a plurality of rigid standoff pins having a mating relationship with at least one of the electrical components and a distancing control structure to control the standoff distance, wherein the distancing control structure comprises one or more stops on at least one pin of the plurality of rigid standoff pins which buttress against the electrical components; and

providing an electrical function structure to provide a predetermined electrical function to at least one of the electrical components, wherein at least a sub-plurality of the plurality of rigid standoff pins have the electrical function structure.

50. (New) The components of claim 49 wherein at least a portion of the at least one pin has a dumbbell shape or a rolling-pin shape.

51. (New) The method of claim 49, wherein the predetermined electrical function is selected from the group consisting of an electrical conduction path function, a resistor function, a capacitor function, an inductor function, and any combination thereof.

52. (New) The method of claim 49 wherein at least one of the electrical components is a printed circuit board (PCB), further wherein the conductive grid array patterns are selected from the group consisting of a bump/ball grid array (BGA), a micro BGA (μ BGA), a land grid array, a pad grid array, and any combination thereof.

53. (New) A standoff/electrical device comprising a standoff member having a predetermined rigid standoff thickness and disposable between electrical components mounted together with opposing conductive grid array patterns to maintain a predetermined distance therebetween, the standoff member having an electrical path electrically connectable to at least one of the electrical components wherein the standoff member comprises a plurality of rigid standoff pins having a mating relationship with at least one of the electrical components, with at least a sub-plurality of the plurality of rigid standoff pins having the electrical path, wherein the

predetermined rigid standoff thickness comprises one or more stops on at least one pin of the plurality of rigid standoff pins which buttress against the electrical components.

54. (New) The device of claim 53 wherein at least a portion of the at least one pin has a dumbbell shape or a rolling-pin shape.

55. (New) The device of claim 53 wherein the predetermined electrical function is selected from the group consisting of an electrical conduction path function, a resistor function, a capacitor function, an inductor function, and any combination thereof.

56. (New) The device of claim 53 wherein at least one of the electrical components is a printed circuit board (PCB), further wherein the conductive grid array patterns are selected from the group consisting of a bump/ball grid array (BGA), a micro BGA (μ BGA), a land grid array, a pad grid array, and any combination thereof.

57. (New) Mounted components comprising:

at least two electrical components having opposing conductive grid array patterns for electrical connection thereof; and

a standoff/electrical device including a standoff member having a predetermined rigid standoff thickness and disposable between the at least two electrical components mounted together with the opposing conductive grid array patterns to maintain a predetermined distance therebetween, the standoff member having an electrical path electrically connectable to at least one of the at least two electrical components wherein the standoff member comprises a plurality

of rigid standoff pins having a mating relationship with at least one of the at least two electrical components, with at least a sub-plurality of the plurality of rigid standoff pins having the electrical path, wherein the predetermined rigid standoff thickness comprises one or more stops on at least one pin of the plurality of rigid standoff pins which buttress against the electrical components.

58. (New) The device of claim 57 wherein at least a portion of the at least one pin has a dumbbell shape or a rolling-pin shape.

59. (New) The mounted components of claim 57 wherein the predetermined electrical function is selected from the group consisting of an electrical conduction path function, a resistor function, a capacitor function, an inductor function, and any combination thereof.

60. (New) The mounted components of claim 57 wherein at least one of the electrical components is a printed circuit board (PCB), further wherein the conductive grid array patterns are selected from the group consisting of a bump/ball grid array (BGA), a micro BGA (μ BGA), a land grid array, a pad grid array, and any combination thereof.

61. (New) A standoff/electrical device comprising:

a standoff device to provide predetermined control of a standoff distance between electrical components mounted together with opposing conductive grid array patterns wherein the standoff device comprises a plurality of rigid standoff pins having a mating relationship with at least one of the electrical components and a distancing control structure to control the standoff

distance, wherein the standoff device is provided integrally as part of one of the electrical components; and

an electrical function structure to provide a predetermined electrical function to at least one of the electrical components, wherein at least a sub-plurality of the plurality of rigid standoff pins have the electrical function structure to provide the electrical function.

62. (New) The device of claim 61 wherein the predetermined electrical function is selected from the group consisting of an electrical conduction path function, a resistor function, a capacitor function, an inductor function, and any combination thereof.

63. (New) The device of claim 61 wherein at least one of the electrical components is a printed circuit board (PCB), further wherein the conductive grid array patterns are selected from the group consisting of a bump/ball grid array (BGA), a micro BGA (μ BGA), a land grid array, a pad grid array, and any combination thereof.